

REMARKS/ARGUMENTS**A. Rejection of claims 1, 15, 16, 19-22 and 58 under 35 U.S.C. §103****i) Rejection under Lee *et al.* U.S. Patent 6,559,984 in view of Turner *et al.* U.S. Patent 6,449,068**

On page 2 of the Office Action, the Examiner has rejected claims 1, 15, 16, 19-22 and 58 under 35 U.S.C. §103 as being obvious over Lee *et al.* U.S. Patent 6,559,984 (hereinafter referred to as "Lee"), in view of Turner *et al.* U.S. Patent 6,449,068 (hereinafter referred to as "Turner"). The Applicants respectfully traverse this rejection and submit that claims 1, 15, 16, 19-22 and 58 are in condition for allowance.

Claims 1, 15, 19, 20 and 58

In order for Turner to be a valid prior art reference under 35 U.S.C. 102(e), its filing date must be earlier than Applicants' date of invention. Turner was filed on March 6, 2001, and claims the benefit of a U.S. provisional application filed on March 6, 2000. It is respectfully submitted that the Applicants' date of invention predates Turner, regardless of Turner's entitlement – or lack thereof – to claim the benefit of the earlier provisional filing date.

Specifically, the Examiner's attention is respectfully directed to the enclosed Affidavit signed by Alan F. Graves, one of the inventors named in the Application, which demonstrates that the date of invention is no later than January 10, 2000. However, this should in no way be construed as an admission that the date of invention is indeed January 10, 2000. For example, the Applicants expressly reserve the right to establish a date of invention earlier than January 10, 2000, should it be necessary to do so at a subsequent stage of prosecution.

From the above, it is clear that Turner is not citable prior art under 35 U.S.C. § 102(e).

The Applicants submit that, in view of the inapplicability of Turner, the only other cited reference, namely Lee, does not render obvious the claimed invention. In support of this argument, Applicants direct the Examiner's attention to the following excerpts of independent claims 1, 15, 19, 20 and 58 (emphasis added):

Claim 1

An optical intensity control system for use with an optical switch [...] the system comprising:

a plurality of optical splitters, each being connectable to an output of a respective one of the wavelength division multiplexers;

[...]

an equalizer connected to the splitters;

[...]

Claim 15

A method of generating control signals for adjusting the intensity of single-carrier optical signals travelling through an optical switch adapted to recombine groups of switched optical signals into multiplexed switched optical signals at an output end of the switch, the method comprising the steps of:

(a) controllably isolating individual switched optical signals from the multiplexed switched optical signals; [...]

Claim 19

An equalizer for generating control signals used in adjusting the intensity of single-carrier optical signals travelling through an optical switch adapted to recombine groups of individual switched optical signals into multiplexed switched optical signals at an output end of the switch, the equalizer comprising:

first means for controllably admitting individual switched optical signals from the multiplexed switched optical signals; [...]

Claim 20

A switch for optical signals, comprising:

[...]

a plurality of wavelength division multiplexers, each having a plurality of multiplexer input ports and a multiplexer output port;

a plurality of optical splitters, each being connected to the multiplexer output port of a respective one of the wavelength division multiplexers;
[...]

Claim 58

A method [...], comprising:
tapping a portion of each WDM optical signal after recombination by the multiplexers to produce a respective tapped optical signal;
[...]

It is respectfully submitted that Lee does not disclose, teach or suggest the above-emphasized limitations of claims 1, 15, 19, 20 and 58. In fact, contrary to suggesting an equalizer that processes signals available after passing through a wavelength division multiplexer, Lee discloses optical power regulating devices that process signals before they are input to a wavelength division multiplexer. In particular, referring to column 5, lines 52-54 and Figures 5A and 6 of Lee, "The wavelength-division multiplexer 540 receives optical signals of various wavelengths from the optical power regulating devices 530 and multiplexes the optical signals." It is noteworthy that Lee's device is actually at a disadvantage, since it is incapable of compensating for power variations introduced by the "wavelength-division multiplexer 540" component itself.

It will thus be appreciated that there is at least one limitation of each of claims 1, 15, 19, 20 and 58, which is not taught or suggested in Lee et al. Furthermore, given the inapplicability of Turner as a prior art reference, it is respectfully submitted that the Examiner has failed to satisfy the full set of criteria required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j)¹. Hence, the Examiner is respectfully requested to withdraw his rejection of claims 1, 15, 19, 20 and 58.

¹ For the Examiner to establish a *prima facie* case of obviousness, three criteria must be considered: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all of the claim limitations. MPEP §§ 706.02(j), 2142 (8th ed.).

Claim 16

This claim is dependent on claim 15 and therefore include all of the limitations of claim 15. Thus, for the same reasons as those which have been presented herein above in support of claim 15, it is respectfully submitted that claim 16 is in allowable form and the Examiner is respectfully requested to withdraw his rejection of this claim.

Claims 21 and 22

These claims are all dependent on claim 20 and therefore include all of the limitations of claim 20. Thus, for the same reasons as those which have been presented herein above in support of claim 20, it is respectfully submitted that claims 21 and 22 are in allowable form and the Examiner is respectfully requested to withdraw his rejection of these claims.

ii) Rejection under Kosaka *et al.* U.S. Patent 5,986,800

On page 5 of the Office Action, the Examiner has rejected claims 1, 15, 16, 19-22 and 58 under 35 U.S.C. §103 as being obvious over Figure 1 of the present application, in view of Kosaka *et al.* U.S. Patent 5,986,800 (hereinafter referred to as "Kosaka"). The Applicants respectfully traverse this rejection and submit that claims 1, 15, 16, 19-22 and 58 are in condition for allowance.

The Examiner has argued that a person skilled in the art would be motivated to apply Kosaka, which relates to optical amplification apparatus, to the field of the present invention, which relates to optical switches or systems used for switching. The Applicants respectfully submit that there is no motivation in the prior art to apply the teaching of Kosaka to the field of the present application. Furthermore, the Applicants respectfully submit that the "motivation" noted by the Examiner on page 6 of the Office Action could only have been obtained from knowledge of the present invention, which would constitute

impermissible hindsight under §2141 MPEP. If the Examiner wishes to maintain his rejection, the Examiner will be required to show where in the prior art the alleged motivation arises.

In addition, the Examiner's attention is directed to the Manual of Patent Examining Procedure (MPEP) §§ 2142.01(a), which states that "to rely on a reference under 35 U.S.C. 103, **it must be analogous art**" (emphasis added). Citing *In re Oetiker*², the MPEP §§ 2142.01(a) states as follows:

The Examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, **the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned**"

With regard to the pertinence of a reference, the Federal Circuit Court of Appeals, in *State Contracting & Eng'g Corp. v. Condotte America Inc.*³, stated:

A factfinder could also conclude that the cited prior art references are **reasonably pertinent to the problem that the patents address**. "A reference is reasonably pertinent if ... it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. Thus, **the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve.**" *In re Clay*⁴.

Now, as stated on page 1, lines 22-27 of the present application, under the heading of *Field of the Invention*, the instant invention "relates generally to systems used for switching optical wavelength channels in a wavelength division multiplexed (WDM) network and, more particularly, to optical switches and cross-connects which are required to be equipped with power equalization functionality for controlling the power of individual carriers in a WDM signal".

² 977 F.2d 1443, 1446, 26 USPQ2d 1443, 1445 (Fed. Cir. 1992)

³ 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003)

⁴ 966 F.2d at 659 (Fed. Cir. 1992)

In contrast, Kosaka "relates to optical amplification apparatus for use in optical transmission systems and so on" (see column 1, lines 8-9), which is clearly distinct from "systems used for switching optical wavelength channels". Kosaka makes no mention or remote suggestion of optical switches or systems used for switching optical wavelength channels.

It is therefore clear that neither the "purpose" (see *In re Clay*) nor the "problem with which the inventor was concerned" (see *In re Oetiker*) are to be found in Kosaka.

Thus, to conclude, the Applicants respectfully submit that (1) impermissible hindsight was used by the Examiner in finding a motivation to apply the teaching of Kosaka to the field of the present application, and (2) Kosaka clearly relates to an art that is distinct from that of the present invention and, as such, does not constitute "analogous prior art" as required by MPEP §§ 2142.01(a). Accordingly, it is believed that any reliance whatsoever by the Examiner on Kosaka would be improper for the purpose of establishing an obviousness rejection as to the claims of the present application.

From the above it is clear that the Examiner has again failed to satisfy the full set of criteria required for establishing a prima facie case of obviousness in accordance with MPEP 706.02(j). Hence, the Examiner is respectfully requested to withdraw his rejection of claims 1, 15, 16, 19-22 and 58.

B. Rejection of claims 2, 3, 23 and 24 under 35 U.S.C. §103

i) Rejection under Lee in view of Turner, further in view of Taylor et al. U.S. Patent 6,049,413

On page 3 of the Office Action, the Examiner has rejected claims 2, 3, 23 and 24 under 35 U.S.C. §103 as being obvious over Lee in view of Turner, and further in view of Taylor et al. U.S. Patent 6,049,413 (hereinafter referred to as

"Taylor"). The Applicants respectfully traverse this rejection and submit that claims 2, 3, 23 and 24 are in condition for allowance.

Claims 2 and 3

For the reasons presented herein above in support of claims 1, 15, 19, 20 and 58 under the section "A i)" above (*viz.*, Rejection under Lee and Turner), it is respectfully submitted that Turner is not citable prior art under 35 U.S.C. § 102(e).

Further, Claims 2 and 3 are dependent on claim 1 and therefore comprise all of the limitations of claim 1 including the limitation already shown to be absent from Lee. In addition, this limitation is not disclosed in Taylor, which merely pertains to an optical amplifier. For this reason alone, it can be seen that the Examiner has failed to satisfy the full set of criteria required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j). Hence, the Examiner is respectfully requested to withdraw his rejection of claims 2 and 3.

Claims 23 and 24

Applicants reiterate that Turner is not citable prior art under 35 U.S.C. § 102(e) for the reasons presented herein above in support of claims 1, 15, 19, 20 and 58 under the section "A i)" above (*viz.*, Rejection under Lee and Turner).

Further, Claims 23 and 24 are dependent on claim 20 and therefore comprise all of the limitations of claim 20 including the limitation already shown to be absent from Lee. In addition, this limitation is not disclosed in Taylor, which merely pertains to an optical amplifier. For this reason alone, it can be seen that the Examiner has failed to satisfy the full set of criteria required for establishing a *prima facie* case of obviousness in accordance with MPEP

706.02(j). Hence, the Examiner is respectfully requested to withdraw his rejection of claims 23 and 24.

ii) Rejection under Kosaka in view of Taylor

On page 6 of the Office Action, the Examiner has rejected claims 2, 3, 23 and 24 under 35 U.S.C. §103 as being obvious over Figure 1 of the present application, in view of Kosaka, and further in view of Taylor. The Applicants respectfully traverse this rejection and submit that claims 2, 3, 23 and 24 are in condition for allowance.

Claims 2 and 3

For the reasons presented herein above in support of claims 1, 15, 19, 20 and 58 under the section "A ii)" above (*viz.*, Rejection under Kosaka), it is respectfully submitted that Kosaka does not constitute "analogous prior art" as required by MPEP §§ 2142.01(a), and therefore any reliance whatsoever by the Examiner on Kosaka would be improper for the purpose of establishing an obviousness rejection of the claims of the present application.

Further, Taylor pertains merely to an optical amplifier and thus it will be appreciated that claims 2 and 3, which are dependent on claim 1 and therefore comprise all of the limitations of claim 1, include various limitations absent from Taylor. It can thus be seen that the Examiner has failed to satisfy the full set of criteria required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j). Hence, the Examiner is respectfully requested to withdraw his rejection of claims 2 and 3.

Claims 23 and 24

Applicants reiterate that for the reasons presented herein above in support of claims 1, 15, 19, 20 and 58 under the section "A ii)" above (*viz.*, Rejection

under Kosaka), it is respectfully submitted that Kosaka does not constitute "analogous prior art" as required by MPEP §§ 2142.01(a), and therefore any reliance whatsoever by the Examiner on Kosaka would be improper for the purpose of establishing an obviousness rejection of the claims of the present application.

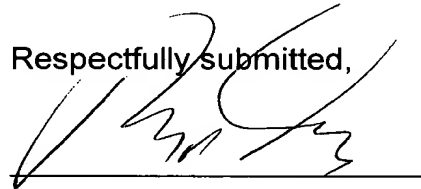
Further, Taylor pertains merely to an optical amplifier and thus it will be appreciated that claims 23 and 24, which are dependent on claim 20 and therefore comprise all of the limitations of claim 20, include various limitations absent from Taylor. It can thus be seen that the Examiner has failed to satisfy the full set of criteria required for establishing a prima facie case of obviousness in accordance with MPEP 706.02(j). Hence, the Examiner is respectfully requested to withdraw his rejection of claims 2 and 3.

CONCLUSION

In view of the foregoing, the Applicants are of the view that claims 1-3, 15, 16, 19-24 and 58 are in allowable form. Favorable reconsideration is requested. Early allowance of the Application is earnestly solicited.

If the claims of the application are not considered to be in full condition for allowance, for any reason, Applicants respectfully request the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims pursuant to MPEP 707.07(j) or in making constructive suggestions pursuant to MPEP 706.03 so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



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